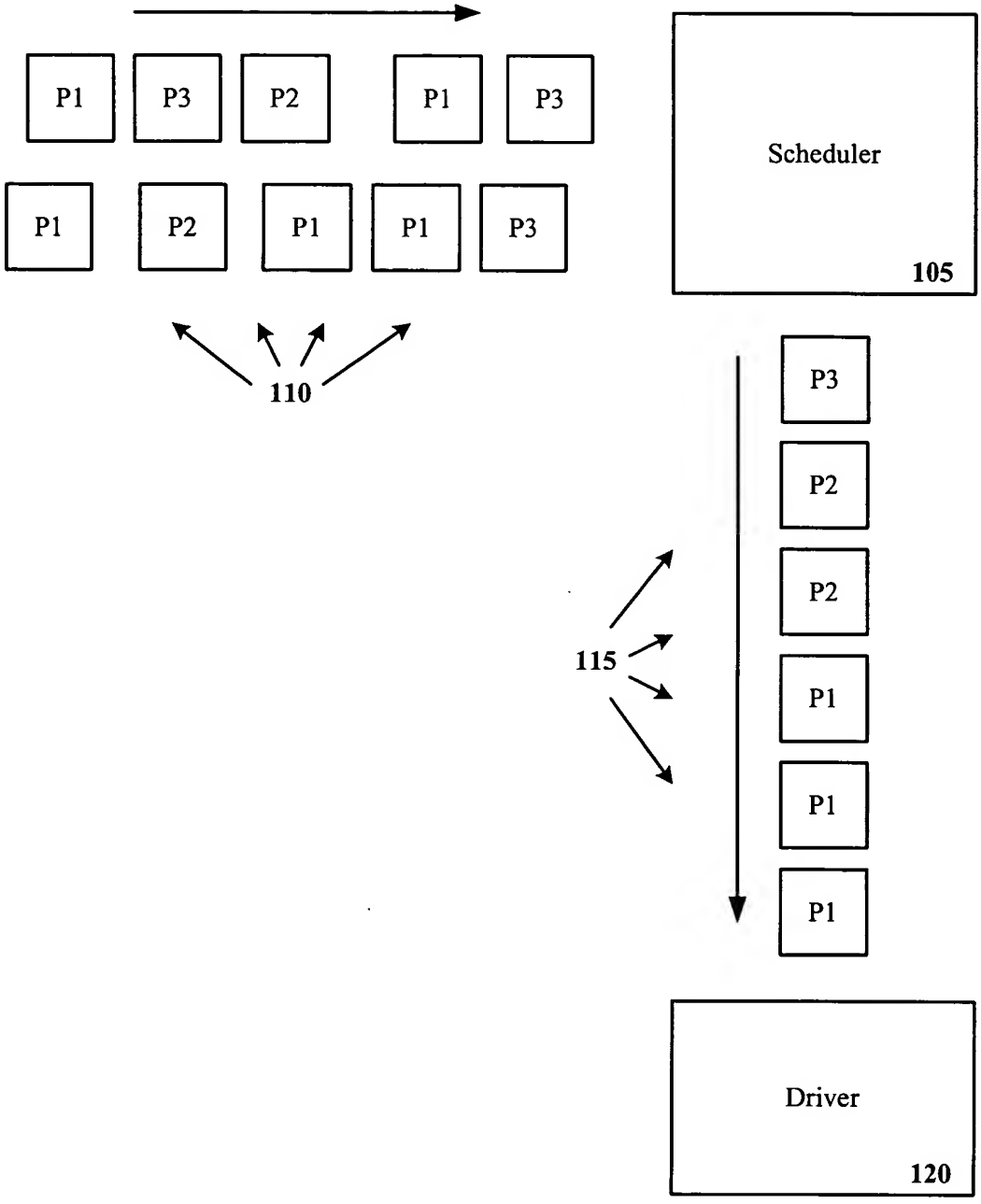

P1
P3
P2
P1
P3
P1
P2
P1
P1
P3
Scheduler
105
110
115
P3
P2
P2
P1
P1
P1
Driver
120

Figure 1

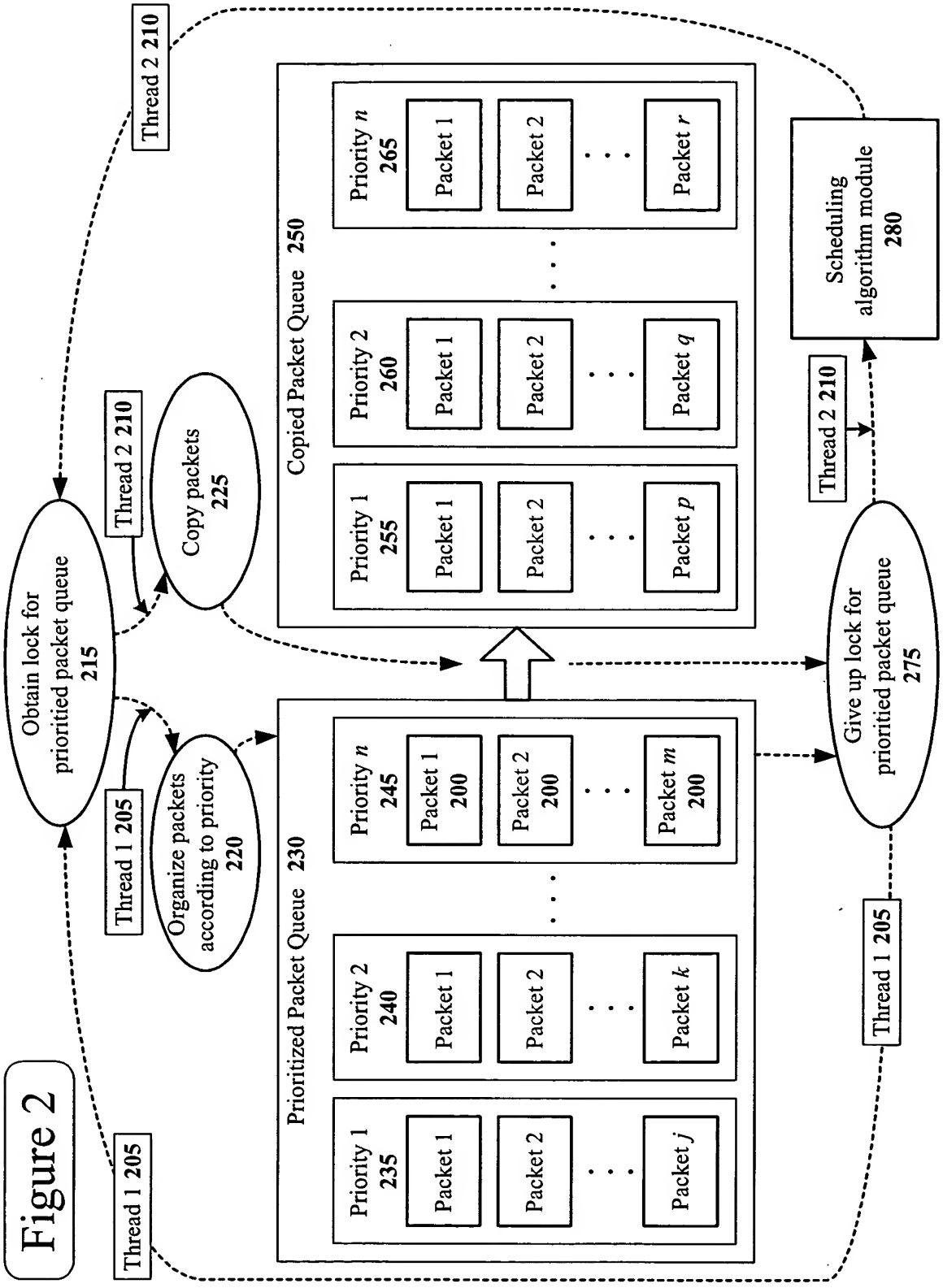

Thread 2 210
Thread 2 210
Copy packets 225
Copied Packet Queue 250
Priority n 265
Packet 1
Packet 2
Packet r
Priority 2 260
Packet 1
Packet 2
Packet q
Priority 1 255
Packet 1
Packet 2
Packet p
Scheduling algorithm module 280
Thread 2 210
Obtain lock for prioritied packet queue 215
Thread 1 205
Organize packets according to priority 220
Prioritized Packet Queue 230
Priority n 245
Packet 1 200
Packet 2 200
Packet m 200
Priority 2 240
Packet 1
Packet 2
Packet k
Priority 1 235
Packet 1
Packet 2
Packet j
Give up lock for prioritied packet queue 275
Thread 1 205
Thread 1 205

Figure 2

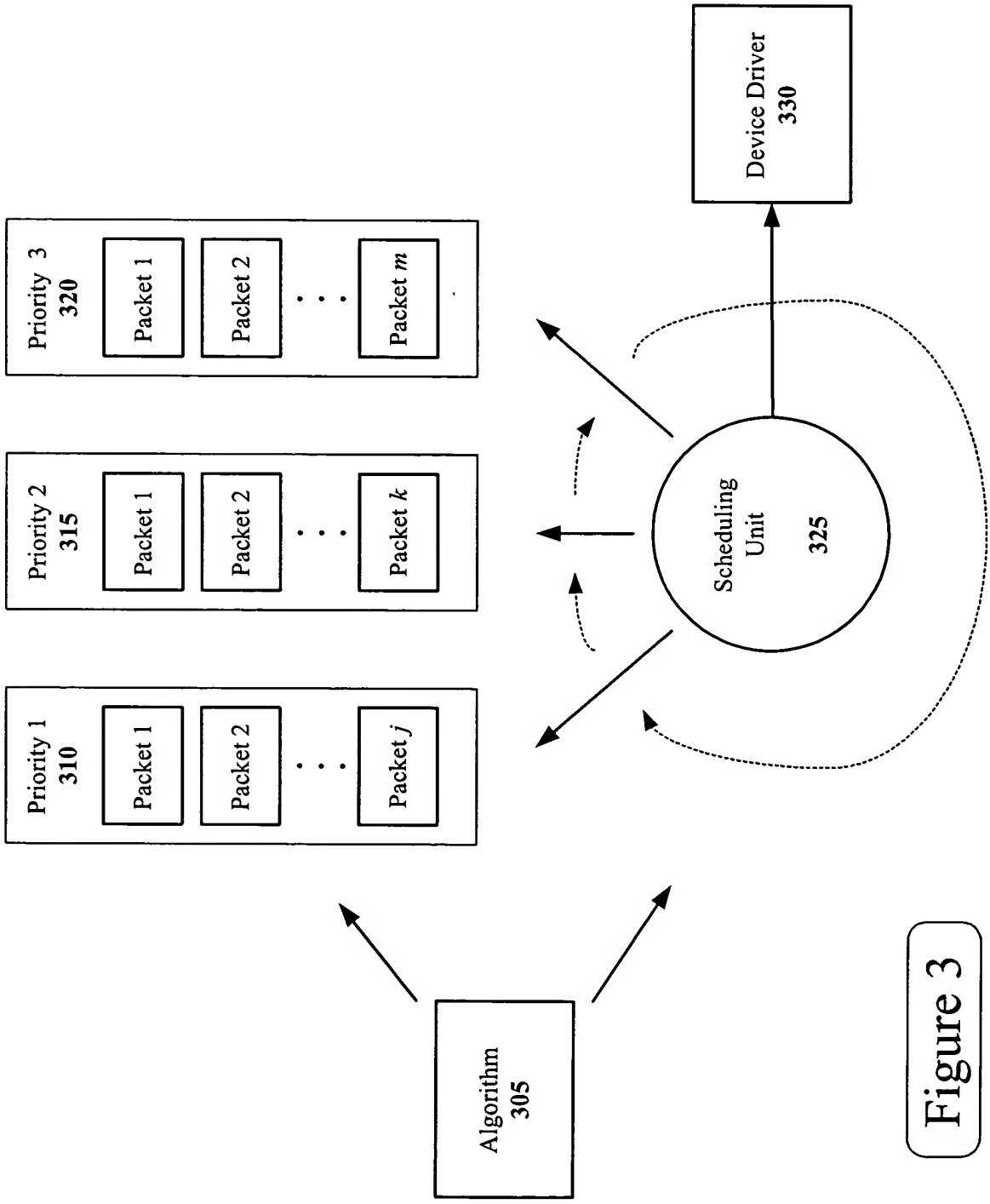

Device Driver
330
Priority 3
320
Packet 1
Packet 2
Packet m
Priority 2
315
Packet 1
Packet 2
Packet k
Priority 1
310
Packet 1
Packet 2
Packet j
Scheduling
Unit
325
Algorithm
305

Figure 3

Figure 4

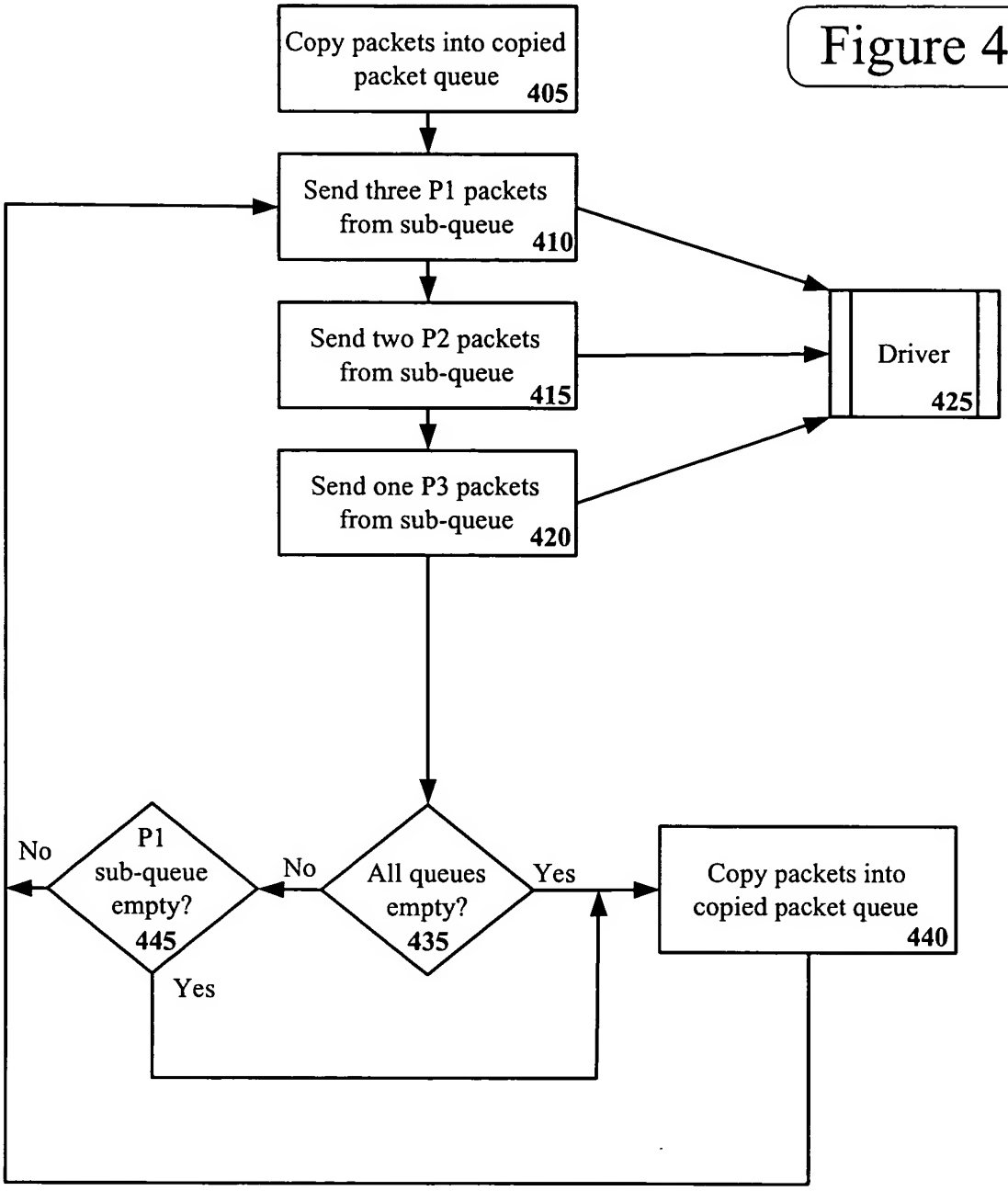
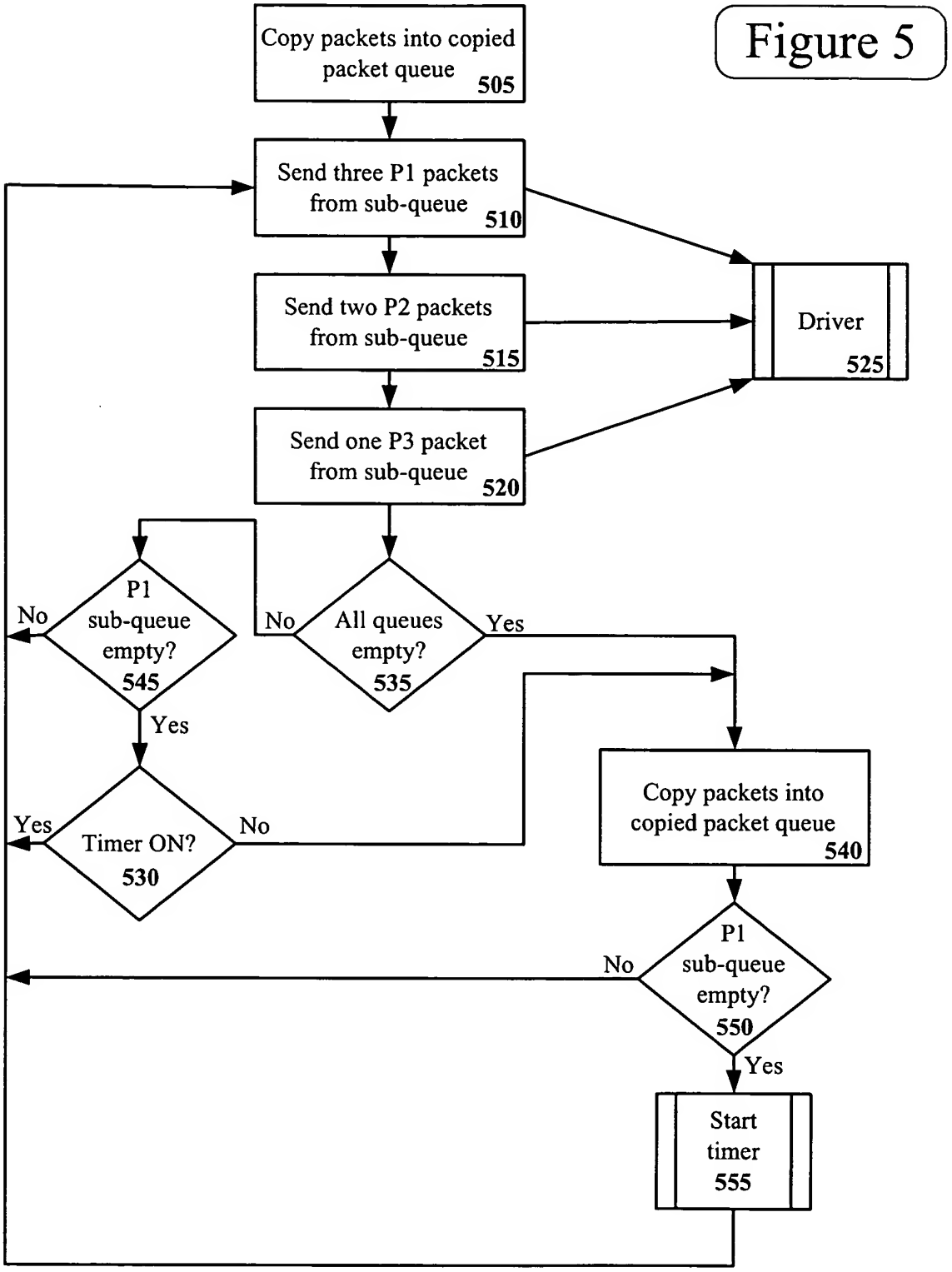

Copy packets into copied packet queue
405
Send three P1 packets from sub-queue
410
Send two P2 packets from sub-queue
415
Send one P3 packets from sub-queue
420
Driver
425
All queues empty?
435
No
Yes
P1 sub-queue empty?
445
No
Yes
Copy packets into copied packet queue
440

Figure 5


Copy packets into copied packet queue
505
Send three P1 packets from sub-queue
510
Send two P2 packets from sub-queue
515
Send one P3 packet from sub-queue
520
Driver
525
All queues empty?
535
No
Yes
P1 sub-queue empty?
545
No
Yes
Timer ON?
530
Yes
No
Copy packets into copied packet queue
540
P1 sub-queue empty?
550
No
Yes
Start timer
555

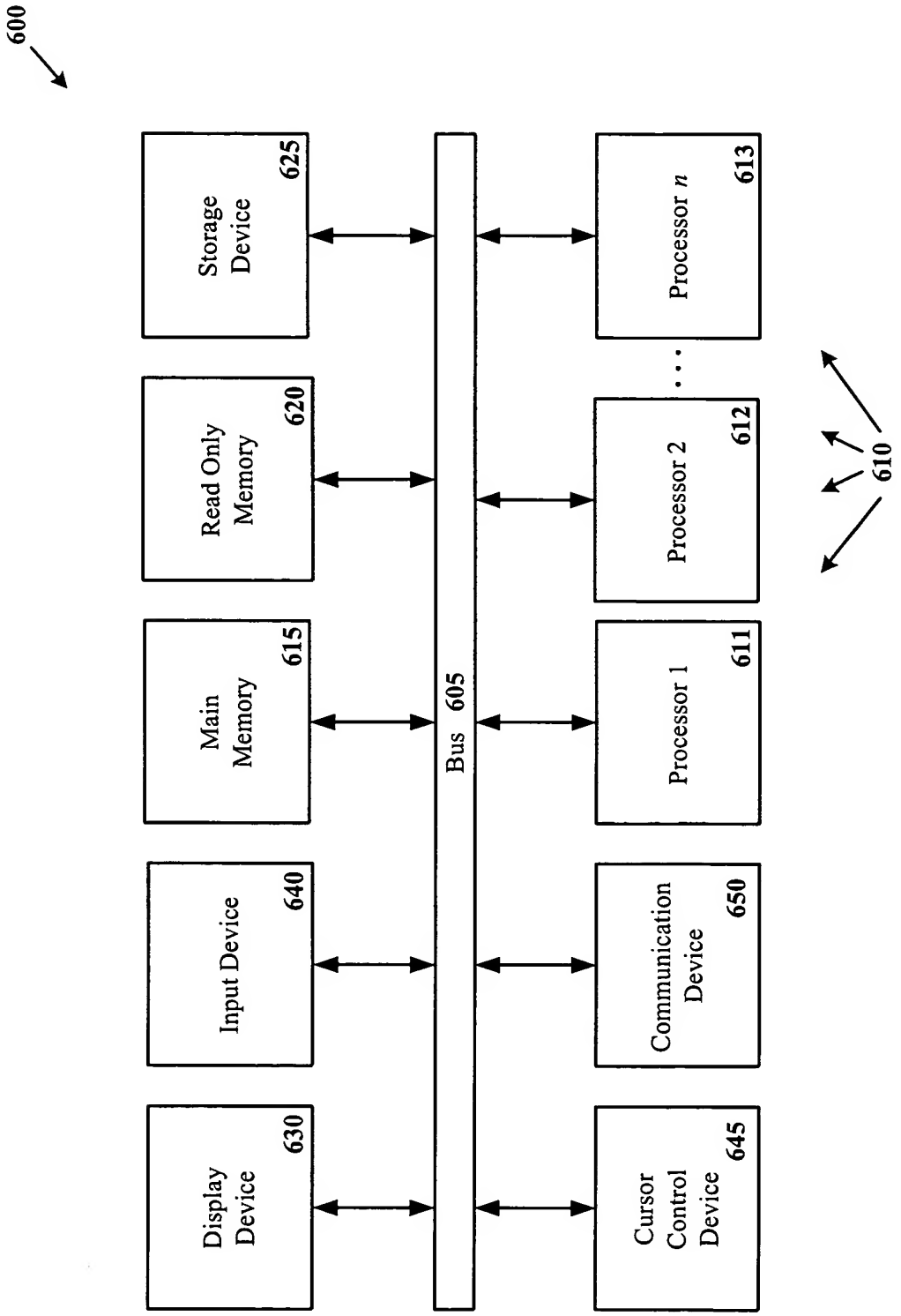

600
Storage Device
625
Read Only Memory
620
Main Memory
615
Input Device
640
Display Device
630
Bus 605
Processor n
613
Processor 2
612
Processor 1
611
610
Communication Device
650
Cursor Control Device
645

Figure 6